ARC DISCOVERY PROJECT NUMBER DP087847

Safeguarding Rural Australia: Addressing Masculinity and Violence in Rural Settings

Risky behaviour in a rural Australian context: Analysis of secondary data analysis

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November 2011

Citation for paper:
Carrington, K., McIntosh, A., Hogg, R. and Scott, J. (2011), 'Risky behaviour in an Australian rural context: Analysis of secondary data' *Safeguarding Rural Australia: Masculinity and Violence in Rural Settings*, Centre for Law and Justice, QUT, Brisbane.

1. Introducing this series of data reports

Our analyses of secondary data for our work-in-progress ARC Discovery Project – *Safeguarding Rural Australia: Addressing Masculinity and Violence in Rural Settings* – are available online. This permits the material in the series to be referenced in documents subsequently published by the research team and also provides a useful resource for others. For the introductory report which outlines the framework and scope for secondary data analyses for this project and for complementary reports analysing secondary data, go the project's home page at: http://www.ljrc.law.qut.edu.au/research/projects/rural/.

Availability of data and the manner in which they have been collected and consolidated have been major determinants of our analytical approach. Moreover, examination of suitably distinguishable classifications to define varying dimensions of 'rural settings' in Australia was essential. The introductory report mentioned above validates the depth and breadth of our inclusive view of violence and presents the schematic which describes the framework designed to structure and manage secondary data analyses.

2. Focus of this report

This report is an update of an earlier one produced in January 2010 (see Carrington et al. 2010) which remains as an ePrint through the project's home page. The report focus on our examination of extant data which have been sourced with respect to personally and socially risky behaviour associated with males living in regional and remote Australia[i] and which were available in public data bases at production. The AIHW (2008: PHE 97: 89) defines personally risky behaviour, on the one hand, as working, swimming, boating, driving or operating hazardous machinery while intoxicated with alcohol or an illicit drug. Socially risky behaviour, on the other hand, is defined as creating a public disturbance, damaging property, stealing or verbally or physically abusing someone while intoxicated with alcohol or an illicit drug.

Potentially traumatic life events for men in rural and remote Australia include financial hardships (often bought on by external factors such as unexpected economic changes, the price of inputs/outputs or extreme droughts, floods or fires), relationship breakdown, social isolation, and unemployment. Additionally, they may not have access to support services during tough times. The risk of suicide may be compounded by greater access to lethal and immediate means of suicide, such as to firearms. Furthermore, many rural people have a strong sense of self-sufficiency which can discourage them from seeking help in difficult times from others including family, friends or their community. Men from Indigenous communities, most of which are in rural and remote Australia, are also among those statistically identified as being most at risk.

For many people in rural and remote Australia, these risk factors may overlap or combine to increase the risk of suicidal behaviour (DHA 2008: Fact Sheet 18). For example, with prolonged drought comes the increased potential for economic downturn and financial stress, bankruptcy or the loss of the family farm, pressures on relationships, and limited resources (time and money) to travel for social outlets or support services. Loneliness, depression and hopelessness, known risk factors for suicide, can lead to other problems such as gambling or substance abuse. For some, these behaviour patterns can lead to feelings of shame and guilt which can further increase risk.

For older children and adolescents, those factors already strongly associated with high rates of mortality – including risk of injury, personally risky behaviour and, for rural and remote youth in particular, difficulties with accessing medical treatment – are exacerbated by increased independence, pressure from peers, and other new challenges and risks that comes with adolescence. This transition period is when new skills such as driving and job skilling are practiced and there is increased exposure to alcohol and other drugs. These factors lead to high rates of violence and injury among young people (AIHW 2008: PHE 104).

No data are available to distinguish potential differences between risk taking behaviour by younger persons in the city and those in the bush but suffice to say that types of hazards faced often vary according to geography. For example, circumstances which facilitate motor vehicles driving at high speed or access to large-scale and potentially dangerous machinery are arguably more available to rural youth than to metropolitan ones. Long-term health conditions and associated risk factors also emerge during this period and may persist into adulthood. Prominent obstacles for young people to negotiate, therefore, include injuries from traffic accidents, occupational hazards and exposures, and the harmful effects of alcohol and other drug use (AIHW 2008: PHE 104).

Alcohol and other substance abuse and unsafe use of motor vehicles and machinery are only two factors often associated with risk taking behaviour that could result in violent death or morbidity. Smoking, poor diet and a sedentary lifestyle, perhaps leading to obesity, can also be harmful to health and thus might be regarded as additional forms of risk taking by individuals. Generally, however, these other forms of behaviour do not result in violent harm through external injuries or abuse and therefore will not be discussed further in this research. Accordingly, we have limited our presentation and discussion of relevant data with respect to risk taking behaviour to consideration of the following issues:

- Misuse of alcohol
- Use of Illicit drugs
- Firearms use and abuse
- Other risky behaviour

3. Misuse of alcohol

The link between alcohol consumption and social disorder is not fully understood. There is, however, overwhelming evidence of an increased risk of being a victim or a perpetrator of violence, or both, where alcohol is consumed or following alcohol consumption (Williams 2000). In the short term, affected persons can require hospitalisation for acute intoxication and related injuries dependence, withdrawal symptoms, psychotic disorders and amnesia (AIHW 2008: PHE 104). Some of these conditions, especially if not appropriately treated, can trigger subsequent violent episodes. Through misuse of alcohol, young people in particular can be left with long-term health and social problems including depression, infections, damage to the liver, heart and brain, and increased risk of cancers and other serious health conditions (AIHW 2008: PHE 104).

In March 2009, the National Health and Medical Research Council (NHMRC) released new guidelines about alcohol consumption and health risk. These guidelines moved away from previous threshold-based definitions of 'risky' or 'high-risk' drinking in recognition of the fact

that the lifetime risk of harm from consuming alcohol increases progressively with the amount consumed (NHMRC 2009). Lifetime risk from alcohol consumption is defined as 'the accumulated risk from drinking either on many drinking occasions, or on a regular (for example, daily) basis over a lifetime' (AIHW 2011: 246). The lifetime risk of harm from alcohol-related disease or injury increases with the amount consumed. A single occasion is defined as 'a sequence of drinks taken without the blood alcohol concentration reaching zero in between' (AIHW 2011: 247). The risk of an alcohol-related injury arising from a single occasion of drinking also increases with the amount consumed.

As with the previous NHMRC concept for assessing risky drinking levels, risks of harm associated with consumption of alcohol increased with level of Remoteness Area (RA) (AIHW 2011: PHE 154, 2008: PHE 105; Carrington et al., 2010). Furthermore, only minimal differences by RA are apparent between the higher levels of risk related to consumption of alcohol at a level that put persons at risk of harm from alcohol-related disease or injury over their lifetime and the rates by RA for those who put themselves at risk from a single drinking occasion at least once a week.

With respect to single occasion risk, one in four persons (25.8%) living in All Remote (Remote and Very Remote) areas in 2010 acknowledged patterns of at least weekly risky alcohol consumption compared with 14.9% of those living in Major Cities (Table 1). In other words, people living in All Remote areas were more likely (by 1.73 times) to put themselves at risk from a single drinking occasion at least once a week than those living in the cities. All Remote persons were also more likely (by 1.64 times) to have lifetime risk consumption levels than their Major Cities counterparts. Additionally, Inner Regional and Outer Regional populations were more at risk than city dwellers although to a lesser extent than those in All Remote areas (refer to rates in Table 1).

Table 1: Single occasion and lifetime risk through alcohol use, people aged 14 years and older, by Remoteness Areas, Australia, 2010 (per cent)

	MC	*IR*	*OR*	*All Remote*
Abstainer/ex drinker (a)	20.4	17.7	17.5	15.3
Single occasion risk:				
Low risk (b)	41.3	40.2	39.9	33.4
At least yearly (c)	23.4	25.0	24.1	25.6
At least weekly (d)	14.9	17.0	18.5	25.8
Prevalence ratio for (d) (g)	1	1.14	1.24	1.73
Lifetime risk:				
Low risk (e)	61	60.3	57.9	54.2
Risky (f)	18.6	22.0	24.6	30.5
Prevalence ratio for (f) (g)	1	1.18	1.32	1.64

(a) Not consumed alcohol in the previous 12 months
(b) Never had more than 4 standard drinks on any occasion
(c) Had more than 4 standard drinks at least once a year but not as often as weekly
(d) Had more than 4 standard drinks at least once a week
(e) On average, had no more than 2 standard drinks per day
(f) On average, had more than 2 standard drinks per day
(g) Prevalence ratio for risky use of alcohol in comparison with Major Cities (1.00)
(Source: After AIHW 2011, PHE 154, Table 4.7)

Persons classified as Aboriginal or Torres Strait Islanders were more likely than other Australians to abstain from alcohol consumption, (24.5% versus 19.0%) but also were more likely to put themselves at risk of harm through alcohol consumption. For example, 31.0% of Indigenous persons were at risk of harm from alcohol-related disease or injury over their lifetime compared with 19.9% of non-Indigenous Australians (AIHW 2011: PHE 154). Simply linking increased rates of risk status through alcohol consumption in All Remote areas which have greater proportions of Indigenous persons in these communities than in other RAs should be avoided without closer scrutiny and recognition of distinctive population characteristics.

Males experienced the majority of the injuries resulting from the harmful effects of alcohol carrying 76.6% of the total for this burden type (Begg et al. 2007). Furthermore, data from National Drug Strategy Household Surveys (NDSHS) (AIHW 2005: PHE 97; 2008: PHE 107) and a recent report into men's health in regional and remote Australia (AIHW, 2010: PHE 120) have consistently shown that males outside Major Cities areas were significantly more likely to drink in quantities with the potential to cause both single occasion and lifetime harm. Males in Outer Regional and All Remote areas were significantly more likely (by 1.17 and 1.25 times, respectively) in 2004 to engage in personally risky behaviour while intoxicated than their counterparts in Major Cities (AIHW 2008: PHE 97) (Table 2). Results for 2001 for personally risky behaviour when intoxicated were broadly comparable to those for 2004 (Table 2).

Table 2: Risky behaviour while intoxicated, persons aged 12 and over, by Remoteness Areas, Australia, 2001 and 2004

	MC (crude) per cent	*MC*	*IR*	*OR*	*All Remote*
Personally risky behaviour					
2004:					
Males	24.9	1.00	1.00	1.17	1.25
Females	12.7	1.00	0.84	1.01	1.01
2001:					
Males	25.7	1.00	1.04	1.07	1.19
Females	13.2	1.00	0.83	1.03	1.12
Socially risky behaviour					
2004:					
Males	10.4	1.00	1.08	0.92	1.28
Females	5.3	1.00	1.20	0.82	1.06
2001:					
Males	10.2	1.00	1.29	1.17	1.08
Females	8.3	1.00	1.36	1.19	1.25

(Source: After AIHW 2008, PHE 97)

For socially risky behaviour, similar results were produced for 2004 as for personally risky behaviour although males in Outer Regional areas were less likely than those in Major Cities areas to engage in socially risky behaviour when intoxicated, a turnaround from 2001 results. In 2004, both males and females in Inner Regional areas were less likely to participate in socially risky behaviour when intoxicated in comparison with 2001 while for males in All Remote areas, rates of socially risky behaviour had deteriorated by 2004.

Another study, the 2004-05 National Health Survey (NHS) (ABS 2006: Cat. No. 4364.0) similarly found that males in Inner Regional and Other areas (Outer Regional and Remote; data were not available for Very Remote) were significantly more likely (by 1.17 and 1.29 times, respectively) than those in Major Cities to report risky or high-risk alcohol consumption.

The burden of disease and injury to Australia has been measured and presented by Begg et al. (2007) in terms of Years of Life Lost due to premature mortality (YLL) and Years Lost due to Disability (YLD) which, when combined, provided a measure of Disability-Adjusted Life Years (DALYs). Alcohol consumption is the strongest predictors of a traumatic injury status (Begg et al. 2007). Of 14 risk factors examined with respect to the broad cause group 'injury', the harmful effects of alcohol were, in 2003, a greater risk factor (with 18.1% attributed to alcohol use) than any other single factor. Two-thirds of the harm resulting in mortality or morbidity attributed to alcohol was due to three factors: alcohol abuse (39.9%), road traffic accidents (14.3%) and suicide (13.0%) (Table 3). Males accounted for, respectively, 80%, 89% and 83% of the DALY burden of alcohol harm. Although DALY outcomes for Remoteness Areas are not available, results discussed in other reports in this series in relation to excess fatalities as a result of suicides (Data Reports No. 1 and 2) and MVTAs (Data Report No. 3) for males living in regional and remote areas point to alcohol harm apparently being a major factor.

Table 3: Violent burden (DALYs) and deaths attributable to alcohol harm by selected causes, Australia, 2003

	Violent cause			
Proportionate burden	***Alcohol abuse/ dependence***	***MVTAs***	***Self-inflicted injuries (incl. Suicide)***	***Violent causes total***
DALYs:				
% of alcohol harm burden	39.9	13.0	14.3	67.3
% attributable to males	80	89	83	83
Deaths:				
Number	918	396	553	1,867
% due to alcohol harm	26.7	11.5	16.1	54.4
% this cause YLL	42	88	99	69

(Source: After Begg et al. 2007, Table 4.9 & Figure 4.11)

With respect to fatalities, over one quarter (26.7%) of deaths ascribed to alcohol harm in 2003 was due to alcohol abuse of or dependence on this substance. An additional 16.1% of deaths attributed to alcohol harm were as a result of self-inflicted injuries including suicide. MTVAs, the third largest mortality agent, were accredited with 11.5% of deaths associated with alcohol harm (Table 3). In total, therefore, these three forms of violent death contributed over half (54.4%) the total number of deaths that occurred in 2003 as a consequence of harmful consumption of alcohol.

4. Illicit drugs

Of the 14 risk factors assessed by Begg et al. (2007) in regard to the broad cause group 'injury', illicit drugs were recognised as being responsible for 3.6% of the group's mortality and morbidity burden (DALYs) in 2003. Illicit drug use was ranked third as a risk factor for injuries

after alcohol and occupational exposures and hazards. In the short term, use of illicit drugs may result in hospitalisations due to over-dosing and related injuries, dependence, withdrawal symptoms, psychotic disorders and amnesia (AIHW 2008 PHE 104). In the long term, drug use can lead to depression, infections with blood-borne diseases, damage to the liver, heart and brain, and increased risk of cancers and other serious health conditions (AIHW 2008 PHE 104). Drug abuse has also been associated with family and relationship conflict, and legal and financial problems (AIHW 2008 PHE 104).

The most recent National Drug Strategy Household Survey conducted in 2010 pointed to an increase from 2007 in illicit drug use mainly due to the proportion of people who had used cannabis (AIHW 2011: PHE 145). Males were far more likely than females to use illicit drugs (AIHW 2011: PHE 145). Compared with people living in Major Cities, there was no strong evidence that illicit drug use was more prevalent in inner Regional and Outer Regional areas. It seems, however, that persons living in All Remote areas were more likely to use illicit drugs such as cannabis, ecstasy and methamphetamines than men in other RAs but less likely to use cocaine than men in urban areas (AIHW 2011: PHE 145).

Overall, the 2011 results showed Inner Regional and Outer Regional males were less likely to have recently used any form of illicit drugs than men in Major Cities (by 0.86 and 0.93 times, respectively) while All Remote males were 1.49 times more likely to have been recent users (Table 4). In general, high proportions of Aboriginal and Torres Strait Islander people used cannabis in the 12 months prior to the 2010 survey compared with non-Indigenous Australians (AIHW 2011: PHE 145). Simply linking increased rates of illicit drug use in All Remote areas to the greater proportions of Indigenous persons in these communities should be avoided without closer scrutiny.

Table 4: Recent users of illicit drug, people aged 14 years or older, by Remoteness Areas, 200107 and 2007 (per cent)

	MC	*IR*	*OR*	*All Remote*
2010:				
Males	13.8	11.8	12.8	20.6
SPR (a)	1	0.86	0.93	1.49
2007:				
Males	14.8	13.9	15.0	17.2
SPR (a)	1	0.94	1.01	1.16

(a) Prevalence ratio for risky use of alcohol in comparison with Major Cities (1.00)
(Sources: After AIHW 2011: PHE 145, 2008: PHE 97)

In the previous survey conducted in 2007, there was also some evidence to suggest that cannabis use was more prevalent in All Remote areas (refer to AIHW 2008, PHE 97). At the time of that survey, illicit drug use other than cannabis was significantly less likely for males in Inner Regional and Outer Regional areas and also All Remote areas (respectively, by 0.8, 0.7 and 0.5 times) (AIHW 2008: PHE 97) (Table 4). Females in regional and remote areas were significantly less or about as likely to use other illicit drugs as those in Major Cities areas.

Although use of illicit drugs appears generally to be less prevalent in All Regional areas, this is no reason for complacency. The report into men's health in regional and remote Australia released by the AIHW in 2010 noted that men living outside Major Cites were more likely to

have experienced a substance use mental disorder throughout their lifetime (AIHW, 2010: PHE 120). There may be a number of reasons for this including an attitude of self-reliance and reluctance to seek help combined with fewer opportunities to access preventive health care (AIHW, 2010: PHE 120). Furthermore, in 2006, men living in Inner Regional, Outer Regional and Remote areas were 22% less likely than men in Major cities to possess an adequate level of health literacy (AIHW, 2010: PHE 120). This can negatively impact upon the ability to understand health information and use that information to make good decisions about personal health and medical care (AIHW, 2010: PHE 120).

Research in North America (for example, Bull 2007a) has pointed to methamphetamines in rural areas increasingly becoming problematic. Anecdotal reports of comparatively high manufacturing and use levels of methamphetamines in rural settings, in comparison with metropolitan centres, might require future investigation. Use of methamphetamines had increased in Inner Regional and All Remote areas between 2007 and 2010 while declining in Major Cities and essentially remaining steady in Outer Regional areas. Nevertheless, percentages of the population using these forms of illicit drugs remain relatively small.

Risk of problematic drug use can be heightened for young people by a number of factors, some of which have occurred before they even reach adolescence. These include maternal drug use during pregnancy, early behavioural and emotional problems, and early exposure to drugs (AIHW 2008: PHE 104). Other factors include peer antisocial behaviour and pressure and various forms of family and relationship conflict and violence.

5. Firearms use and abuse

Available firearms data points to there being, by 2004/2005[ii], 2,528,888 registered firearms in Australia belonging to 731,567 individual licence holders (Mouzos and Sakurai 2006). This compares to 2,165,170 million registered firearms and 764,518 licence holders in July 2001 (Mouzos 2002). Accordingly, over 10,000 additional persons became licence holders during each of the intervening years and a further 363,718 firearms were registered during the period. Whether these statistics reflect persons increasingly conforming to requirements for registration and licencing or greater levels of ownership and use of firearms cannot be interpreted from the results.

Data on firearms numbers, ownership, location, types of fatalities, or homicide motives (for example, domestic violence, revenge or some other motive) are not consistently or regularly published. The AIC currently produces an annual report on firearms thefts which has been a helpful but not satisfactory surrogate with respect to firearms use and abuse in rural settings in comparison with metropolitan areas. Stolen firearms represent less than 0.1 per cent of registered firearms (0.06% in 2006-07) reported to police (Bricknell 2008). Half the thefts are classified as general burglaries in that other items – usually tools – are stole alongside firearms. Apparently there is a high degree of opportunism in thefts as opposed to firearms specifically being targeted (Mouzos 2007).

There has been a continuing downward trend in the number of firearms reported stolen since the early 1990s. In fact, the number of firearms stolen on an annual basis has more than halved in that time declining from 4,195 on average between 1994 and 2000 to 1,526 in 2006-

07 (Bricknell 2008). This indicates that storage requirements introduced through legislative reforms could be having positive effects by reducing the number of firearms targeted by criminals. Results presented here suggest, however, that persons in rural and regional Australia have been slower to respond to legislative requirements thereby increasing the risk of firearms being accessible for violent acts.

Firearms were responsible for 321 deaths in 2006, 155 through suicides (8.6% of all suicides in 2006), 29 through assaults (18.7% of 2006 homicides) and 56 through accidental discharge. The number of deaths recorded as accidental firearm discharge is a relatively large proportion of firearms deaths (17.4% in 2006) although it totalled only 1.0% of all accidental deaths in that year. Number of accidental deaths in previous years could not be sourced from published data. Apparently, the number recorded in the three registration years 2003 to 2005 was higher than in 2001 and 2002 (ABS 2005: Cat. No. 3317.0.55.001).

Fatal firearm injuries also occur through legal intervention and as a result of causes undetermined by the coroner – that is, cases in which it was unclear whether the injury was purposely or accidentally inflicted (81 in 2006) (Mouzos and Rushforth 2003). Nine out of ten firearm related deaths have historically involved males (Mouzos and Rushforth 2003). The majority of firearms used to commit homicide are not registered and the offenders are not licensed (Mouzos 2007). Some firearms used in homicides are suspected to have been stolen and of course theft is one source of firearms for the criminal community.

Suicides attempted with firearms are almost always fatal (Officer et al. 1999). Given the frequency, impulsiveness and low intent of many suicide attempts, the presence of guns may convert many 'attempts' into deaths through the high lethality and irreversibility of firearm injuries. Although suicide deaths using firearms have apparently halved over the past decade, from 309 deaths in 1996, to 155 deaths in 2006 (ABS 2008: Cat. No. 3303.0; ABS 2007: Cat No. 3309.0), rates of suicide increase by level of remoteness (as previously discussed). In fact, suicide rates in regional and remote regions have risen substantially over the pasts three decades, especially among men (DHA 2008, Fact Sheet 18). Firearm-related suicides were most common in Outer Regional and All Remote area in 2003-04 than in the other two RAs of Major Cities and Inner Regional areas (Henley et al. 2007).

Concerns have been expressed about a potential link between the elevation of rural firearm suicide rates and the availability of and need for firearms in rural areas; a lack of safety in storage; and the recreational use of firearms in small rural communities with dwindling populations (Officer et al. 1999). These concerns may be particularly relevant to young people especially when combined with impulsive and/or aggressive behaviour and/or alcohol consumption, especially among individuals who are unwilling or unable to access mental health services.

Although statistics for firearm deaths in the last several years point to a noticeable decrease in intentional (suicide) firearm deaths, there has been a concurrent noticeable increase in accidental (unintentional) firearm deaths (Table 4 and Figure 1). The largest increase in accidental firearm fatalities in the five years to 2005 was in New South Wales (increase of 19 deaths), while suicide firearm deaths in New South Wales decreased by 58 deaths (around half

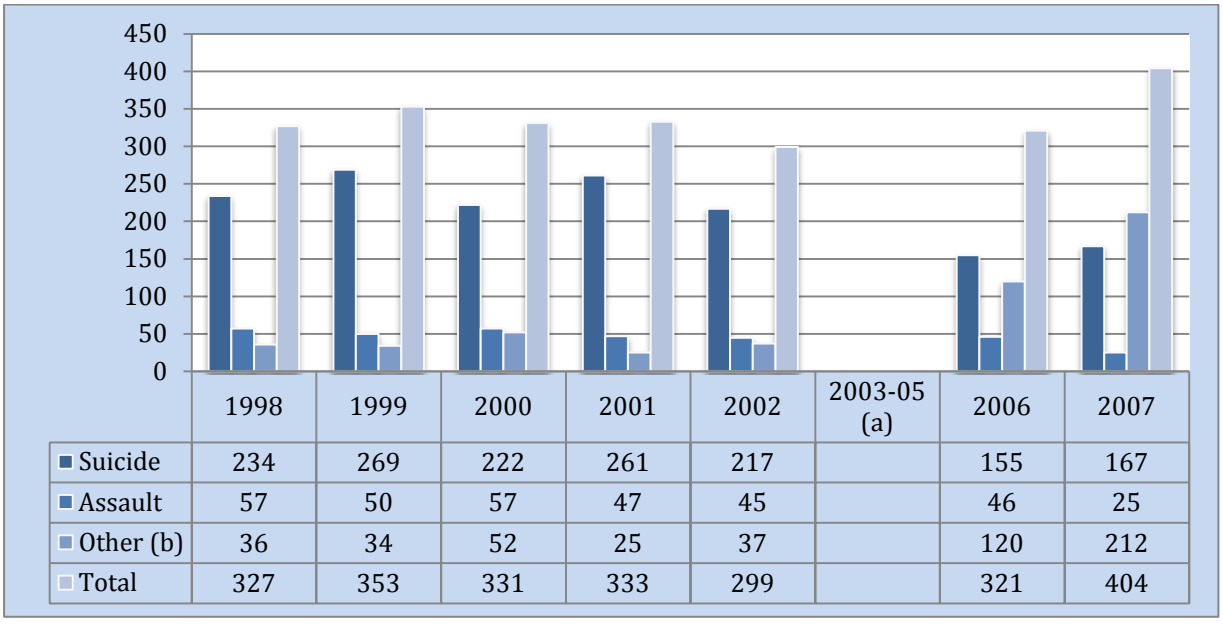
of the national decrease) (ABS 2005: Cat. No. 3317.0.55.001). Furthermore, open cases on the National Coroners Information System (NCIS) which related to death due to firearm discharge totalled 81 or 3.7% of all open cases in 2006[iii]. Queensland (35) and New South Wales (25) accounted for 61.7% of these cases.

Table 5: Types of firearm deaths, Australia 2001-06

	2000	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*
Suicide	222	261	217	193	167	147	155	167
Assault	57	47	45	37	32	23	46	25
Accidental death	45	18	31	n.p.	n.p.	n.p.	56	183
Undetermined	2	3	-	n.p.	n.p.	n.p.	64	29
Legal intervention	5	4	6	n.p.	n.p.	n.p.	-	-
Total	331	333	299	n.p.	n.p.	n.p.	321	404

n.p. Not published
Note: Data presented by ABS is incomplete
(Source: ABS 2009, Cat. No. 3303.0; ABS 2006, 2008, Cat. No. 4510.0; AIHW 2009, Cat. No. INJCAT 121, Mouzos and Rushforth 2003)

In 2003–04, there were 48 accidental firearm deaths (National Injury Surveillance Unit of the Australian Institute of Health and Welfare, Injury deaths, Australia 2003–04). It should be noted that assessment of the source of these data (the National Coroners Information System) suggests that many of these cases would be reassigned as suicides, on the basis of information available after completion of coroners' inquiries.



	1998	1999	2000	2001	2002	2003-05 (a)	2006	2007
Suicide	234	269	222	261	217		155	167
Assault	57	50	57	47	45		46	25
Other (b)	36	34	52	25	37		120	212
Total	327	353	331	333	299		321	404

Figure 1: Firearm deaths, 1998-2002, 2006-2007
(a) Comparative data not available for 2003-05
(b) 'Other' includes accidental, undetermined and legal intervention firearms fatalities
(Sources: ABS 2009, Cat. No. 3303.0; ABS 2006, 2008, Cat. No. 4510.0; Mouzos and Rushforth 2003)

As previously noted, the numbers, types and locations of registered firearms in Australia are not regularly published. Furthermore, data with respect to the geographic distribution of licence holders are not available. In the absence of such data, the AIC has analysed the

distribution of theft and population by Remoteness Areas in its two annual reports into firearm theft in Australia produced since 2005-06. Results show that, although two thirds of the population lived in Major Cities, less than one third of firearms thefts were reported in these areas (Figure 2). In fact, as many firearms thefts were reported in Outer Regional and All Remote areas, home to only about 12.5% of the population, as in the Major Cities areas.

Rifles account for an increasing majority of all stolen firearms: 57% in 2006-07 (Bricknell 2008) and 58% in 2004-05 (Mouzos and Sakurai 2006), up from 52% 1994-95 to 1999-00 (Mouzos 2002). Around one-quarter of stolen firearms are shotguns, mostly single-barrel or double barrel. These patterns for the most frequently stolen types of firearms most likely reflect the extent of ownership, especially in rural areas. In recent years, handguns have constituted only about 7% of firearms reported stolen (Bricknell 2008; Mouzos and Sakurai 2006).

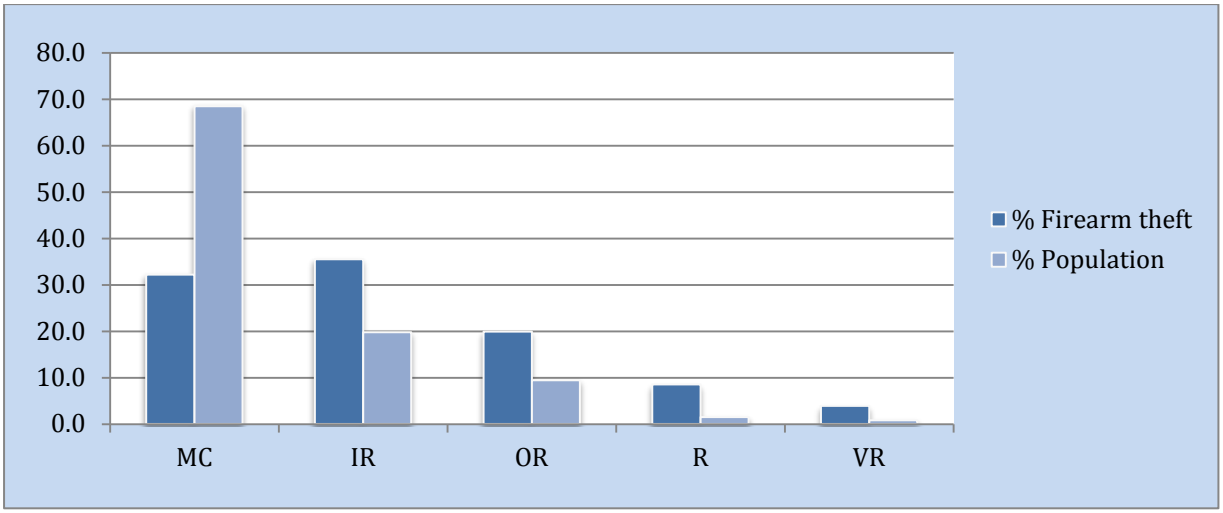


Figure 2: Distribution of reported firearms thefts, population by Remoteness Areas, 2006-07
(Source: After Bricknell 2008, Table A4)

The highest number of reported thefts of all types of firearms during 2006-07 was from within Inner Regional areas (Bricknell 2008). Private residential premises were the primary targets for firearm theft. More than 80% of rifles, shotguns and air rifles were stolen from this type of location in 2006-07 (Bricknell 2008). Thefts from vehicles regularly account for about 10% of all reported firearm thefts. Owners not locking vehicles facilitate about one in four vehicle-based thefts.

The highest proportion of firearms thefts took place in Inner Regional areas for all categories of storage locations including the prime target, private residences (Table 5). These results point to homes and other locations within regional and remote areas and locations being more vulnerable to firearms theft than locations in Major Cities areas.

Table 6: Firearm thefts by location and Remoteness Areas, Australia 2006-07 (per cent)

	MC	*IR*	*OR*	*R*	*VR*	Total
Private residential	33.3	35.7	19.6	7.6	3.8	76.7
Business premises	29.6	38.9	22.2	3.7	5.6	8.7
Other accommodation	25.0	50.0	25.0	0.0	0.0	0.6
Vehicle	22.6	32.3	19.4	21.0	4.8	10.0
In transit	0.0	33.3	33.3	33.3	0.0	0.5
Other	47.6	28.6	23.8	0.0	0.0	3.4
Total	32.2	35.4	20.1	8.4	3.9	100.0

(Source: After Bricknell 2008, Table A5)

Although a large majority of firearms reported stolen were registered and their owners held valid firearm licences (around 90% in 2006-07 for both registrations and licences) only about a half of firearm owners reporting thefts were considered storage compliant (Bricknell 2008). Consequently, it seems registered owners in regional and remote Australia appear less likely to comply with legislated requirements for appropriate storage, thereby increasing the risk of inappropriate use (including self-harm) by family members, friends and neighbours as well as by those with criminal intent.

Male death rates due to injury and poisoning increased with remoteness; rates in *Very remote* areas were 3.1 times as high as *Major cities*. Similarly, men living outside *Major cities* were 18% more likely to report a recent injury.

6. Other risky behaviour

After alcohol consumption and apart from use of illicit drugs, engagement in risky or dangerous driving and personally and socially risky behaviour are thought to be the strongest predictors of violence causing a traumatic injury status (Begg et al. 2007). This finding has been supported by other research (Field and O'Keefe 2004) which pointed to trauma patients being not only more likely to identify with use of alcohol in a hazardous or harmful way but also to describe themselves as impulsive or sensation seeking. In spite of this, trauma patients themselves are less likely to identify with driving and violence related risk behaviours (Field and O'Keefe 2004).

Ongoing trauma as a result of serious injury most likely presents as a larger problem in rural settings than in Major Cities, impacting upon the lives not only of victims but also of family members, friends and carers. Greater difficulty in accessing appropriate services in the bush in comparison with metropolitan areas most likely adds to the burden being experienced by individuals as well as their communities. This places additional stressors on those affected and points to morbidity itself being risky behaviour and a potential precursor to violent acts or incidents.

Links have been made between mental health conditions and injury, particularly in relation to risk taking behaviour including alcohol and illicit drug misuse, and psychological traits such as impulsivity, sensation seeking, and risk perception. Understanding these linkages might be of particular relevance when considering aspects of masculinity and violence in rural settings

given the recognised propensity for some people in the bush, especially men, to be reluctant to address and discuss mental health issues.

Endnotes

[i] This series of reports has used, where possible, the ABS Australian Standard Geographical Classification (ASGC) for Remoteness Areas (RAs) to differentiate between the city and the bush and to distinguish varying levels of 'rurality' (ABS 2003: Census Paper No. 03/01). RAs are classified as Major Cities (MC), Inner Regional (IR), Outer Regional OR), Remote (R) and Very Remote (VR). Refer to the introductory report for further information on recognised variations to these classifications.

[ii] Due to differences in recording systems used by State and Territory firearms registries, information on the number of licence holders and registered firearms for each state and territory was not available for the same reference period (New South Wales, Victoria, Tasmania and Northern Territory – April 2004; Queensland – March 2004; South Australia – June 2004; Western Australia – February 2005; ACT – March 2005) (AIC 2006).

[iii] Reluctance by Coroners to make determinations of 'suicide' and high number cases with a status of 'open' on the NCIS have impacted on suicide data. Where coroners' cases are not finalised and the findings are not available to the ABS in time for publication of causes of death statistics, deaths are coded to other accidental, ill-defined or unspecified causes rather than suicide. The causes of death statistics are not revised once a coronial enquiry is finalised (ABS 2008: Cat. No. 3303.0.)

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